

# 'SOUND DESIGN FOR THE WEB'

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## Abstract

Sound Design is perhaps the most overlooked and potentially one of the most creative forms of communication on the Web, all too often severely neglected in most interactive briefs. Here we look at new ways of working with audio in Interactive Media.

In a mirroring of the history of cinema, the moving image and animation side of the Internet equation has stealthily moved ahead of much regard for audio. As the whole medium of the web is in such infancy, it can be forgiven this, after all it took nearly thirty years for cinema to make the technological advances necessary for the synchronisation of sound to image. Any medium which employs the use of moving images implies the use of sound, this is true for cinema, TV, the internet down to handheld devices and all forms of user interface, even the code lock on the door to work makes gentle purring beeping noises (provided you get the code right).

Web sites and web design represent a curious amalgam of art forms, a mix of user interface, narrative and information systems. It is perhaps the narrative or 'stylistic' elements of web design that most interest designers, and particularly sound designers - the process of conveying a feeling, an emotion through visual and sonic stylistics. Many web designers however, still implement sites with absolutely no consideration for sound, or worse, providing last minute, poorly thought-out and irritatingly repetitive spot effects and loops that do little more than degrade what hard work has been done within the visual and other aspects of the site design. These poorly thought out and last minute decisions provide users with something that no designer wants, an excuse to leave the site.

However, with recent and welcome advances within the delivery of web audio, such as streaming mp3 and sound object action script in design software such as Flash5 and Shockwave, web sites are taking their first tentative steps into what can be considered in historical terms as the coming of sync sound.

In e-commerce, it is now widely accepted that the most important factor in generating revenue from a site is not the number of hits a site gets, but in fact the amount of on-line time the user stays logged on to that particular site. Well designed and implemented audio is now playing a vital role in this, and design agencies are at last beginning to take notice of the power of sound.

In terms of designing a site for sound, an initial phase should be built into the 'creative' planning sessions. Mistakes that film makers still often make is that sound and music are bolted on in the final phase of post production, missing so many opportunities for sound design to bring something creative to the whole process. Indeed film sound designers such as Randy Thom and Walter Murch have done, and written much, to change this way of working. These same design mistakes in the medium of film can be avoided within those of multi-media design. Being on board on an initial design meeting, or 'pitch' can produce ways of seeing the project from a variety of fresh and creative approaches, indeed your competitors may not even have considered sound in their pitch.

Certain information need not be represented visually at all, but can be materialised by a carefully chosen voice over, music or purely through sound atmosphere. A voiceover, for example, can communicate so much stylistically, as the TV advertising industry clearly understands, it can convey notions of grandeur, richness, ambiguity, and comedy all practically subliminally at the same time as conveying information. The same is true of sound effects and music, and it only appears to be a recent idea that these sounds should in fact be designed to compliment the overall effect of the website. The decisions made for sound at the design stage will greatly effect the perception of the finished product, be it web site, computer game, TV commercial or Film.

There is also the necessity to understand the concept of 'immersion', this is comparable to the concept of 'suspension of disbelief' in a cinema audience. Put simply, anything that snaps you out of the dream that what you are seeing is constructed and quite often this takes the form of bad sound.

The primary concern for designing sound for a web site is to sync with what is happening in the visuals, both in terms of style and animation. The sound track should form a discreet and organic part of the user interface. Consideration should also be made to the amount, type and style of information represented on screen. A page consisting of a great deal of textual information for example would not be effectively serviced by a hectic industrial soundscape, rather a subtle and slowly evolving ambient atmosphere, or even silence with the occasional effect for rollovers and page turns.

Even though the technological capabilities for high quality web audio have been around for a year or so now, virtually all audio enabled sites still have a very impoverished approach to the use of sound and music. Suspicion is that this is symptomatic of a period prior to the establishment of dedicated sound departments within serious multi-media production companies. Sound still seems to be an afterthought of web designers, who after all are primarily visually trained, thinking that any sound is better than nothing. It is greatly to the detriment of both web designers and the companies who commission from them that in-house or even freelance sound designers and musicians (these creatives are usually one and the same person) are not yet an active feature.

There is however, cause for great optimism, as web design agencies begin to conceptualise themselves as fully fledged multi-media production facilities, rivalling and perhaps surpassing the revenues of film, TV and advertising corporations, in-house and freelance sound designers are now finding themselves to be much in demand.

Another most important and overlooked element to good sound design, particularly made accessible by Flash5's sound object action script is creativity within the functionality of audio on the web. A sound designer needs to be able to think the whole site through as a macro-event or narrative, in the same way we would a narrative in a film. Innovative ways are necessary in this implementation in order to move forward through the site, subtle real-time cross fades and seamless loops, audio which fades or pans according to mouse position, are all basic ways of achieving further user-immersion.

There are also a variety of memory saving ways of implementation which are necessary to keep the loading times of a site down. This is usually the prime reason many web designers choose to ignore sound, or to simply use as little as possible. There is nothing wrong with using as little sound as possible, but this should be primarily an aesthetic issue rather than a technical one.

Simple ways of re-using sounds within Flash so that they do not sound repetitive can be achieved through building fade envelopes into many variations of the same sound, a rollover for example could be randomly played for or five times each time with a different fade envelope, thus cutting down on the need to have four files by just using one. The level of MP3 compression that is set when publishing from Flash is also a critical parameter to bear in mind in terms of audio quality. It can be the difference between sound and music sounding scratchy and jarring or clean and sparkly, and this choice will change the way that the overall quality of the site is perceived by the user. The most obvious feature available to Flash designers is the choice of whether a sound is pre-loaded or is streamed. The use of streaming, providing the user has a good connection, can greatly increase and enhance the amount and quality of audio that is implemented in a site. Entire tracks can now be streamed in, rather than having to rely on a preloaded loop. This technique has revolutionised the degree to which web sites can shake off their association with low memory, poor quality and repetitive loops, and many of the sites which we will look at now will make full use of this feature.

#### **[www.donniedarko.com](http://www.donniedarko.com)**

This film trailer site is by hi-res.net, a company who excel in their creative use of audio. Featured here are both superbly implemented and high quality audio delivery. The music uses clever loop points which betray their repetitive nature, and importantly they make use of sound object action script which fades smoothly between the sections of music.

#### **[www.patient-b.com](http://www.patient-b.com)**

This folio site makes excellent use of streaming background music, and importantly gives users the choice of tracks and connection speeds. It also employs ambience and ambient effects to conjure up the dark and often comical London Underground atmosphere.

#### **[www.estudio.com](http://www.estudio.com)**

This site has been around for some time now and still sounds great, again the implementation of sound effects and music dovetailing together has great effect on the perceived quality of the entire site.

#### **[www.skysound.com](http://www.skysound.com)**

The website for George Lucas' legendary post production sound ranch stands out with its perfect use of understated sound. The wind rustling through the grass, the subtle rollover effects and the gently building nocturnal wildlife effects all make this site into a sensual experience.

#### **[www.singlecell.org/april](http://www.singlecell.org/april)**

#### **[www.modifyme.com](http://www.modifyme.com)**

#### **[www.thesquarerootof-1.com](http://www.thesquarerootof-1.com)**

These sites represent a view of the future for creative sound design on the web, particularly thesquarerootof-1. The shockwave implementation, the ability to actually change the playback speed of the sounds, reverse sounds in real-time, are second only to the choice of the sounds themselves.

#### **[www.planetofthedrums.com](http://www.planetofthedrums.com)**

#### **[www.dform1shiftfunc.net](http://www.dform1shiftfunc.net)**

Both these sites have superb use of high quality, and highly intricate industrial soundscapes. They strongly highlight the potential for creativity within the medium and that web designers should not be afraid of commissioning sound.

## Software

The tools available for sound design are many. From high end, hardware- accelerated editors and multi-track mixers such as Pro tools or Soundscape, to purely software based solutions such as Cool Edit, Vegas Video, Sound forge or Acid. Many of these products can be found in any professional studio yet can also be employed on the home or laptop set up. The nature of all multi-trackers or editors is essentially the same and their employment is often totally down to personal preference. However, some have stronger features than others so you may indeed be using a mixture of these various tools depending on the nature of the project.

While trained and experienced sound designers are irreplaceable, rather than just taking sounds straight from a CD or downloading arbitrary loops and spot effects from websites, it is an essential tool in any web designer's skill set to be able to effectively edit and manipulate sound for any web site that may be produced. Within the main sonic needs of the online industry, there are a collection of sounds which constantly re-occur in any interactive brief, these may be defined as the 'User Interface sound sets', consisting of rollovers, button pushes, clicks, whooshes and ambient atmospheres. In terms of music, again ambient atmosphere loops and simple music loops are often requested, although the latter has recently fallen from favour with the advent of broadband and cable Internet access bringing the ability to stream in full music tracks. In terms of rollovers, the important factor is to allow the sounds to fade in and out to silence, so as to increase the subtlety and decrease the possibility of and sudden clicks as the sound starts or finishes. Button pushes and clicks are invariably very tiny slices of sound cut out from a larger piece of source material. The choice of source material from which to build your UI sound sets can be absolutely any piece of sound or music, and its choice is essential to creating a coherent sound design for the overall aesthetic of a site.

Building sound design into an interactive brief has been greatly neglected by web creatives. The amount of aesthetic opportunities available with the advent of broadband and sound implementation in Flash 5 are now such that the medium cannot be ignored. A plethora of technical and aesthetic design opportunities can be addressed through the use of sound as early as the initial pitch. Notions of what information need be materialised through voice over, sound or music can all be conceived as part of the early planning stages, and it is to the detriment of most design that such decisions be 'bolted on' in the final end phase of a site's design life.

A constantly recurring set of sounds can be found in all forms of interactive user interface, particularly in the mixed art form of the internet. These sounds may be simply defined as the User Interface Sound Set and commonly comprise clicks, button pushes, rollovers and ambient loops. Invariably these sound sets are created from the same source sound material in order to achieve an aesthetically holistic sound design throughout the site. While experienced sound designers are irreplaceable, it is an essential part of any interactive designer's skill set to be able to edit and manipulate basic User Interface Sound Sets. The tools and techniques are widely available and relatively easy to perfect.